RECEIVED
CENTRAL FAX CENTER
DEU 1 0 2003

Unofficial

FAX TRANSMISSION

Date:

December 10, 2003

To:

Examiner Paul Dinh

Company:

From:

Mani Adeli

Pages:

12

(including this sheet)

Fax 1 of 2

Based on PTC/SB/08 a & b (95-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Please type a plus sign (+) inside this box →

Application Number 10/079,270 Substitute for form 1449A/PTO Filing Date 2/20/02 INFORMATION DISCLOSURE First Named Inventor Steven Teig STATEMENT BY APPLICANT Group Art Unit 2825 (use as many sheets as necessary) Examiner Name Paul Dinh 7 Attorney Docket Number SPLX.P0127 of Sheet 1

	- ,			U.S.	PATENT DOCUMENTS	
Examiner* Initials	Cite No.1		d Code'	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	2001/0009 031	A1	07-19-2001	Nitta et al.	
-	2.	2002/0182 844	A1	12-05-2002	Igarashi et al.	
	3.	2003/0025 205	A1	02-06-2003	Shively	
	4.	2003/0005 399	A1	01-02-2003	lgarashi et al.	
	5.	4,593,363		06-03-1986	Burstein et al.	
	6.	4,855,929		08-08-1989	Nakajima	
	7.	5,267,176		11-30-1993	Antreich et al.	
	8.	5,375,069		12-20-1994	Satoh et al.	
	9.	5,587,923		12-24-1996	Wang	
	10.	5,618,744		04-08-1997	Suzuki et al.	
	11.	5,633,479		05-27-1997	Hirano	
	12.	5,637,920		06-10-1997	Loo	
	13.	5,640,327		06-17-1997	Ting	
	14.	5,663,891		09-02-1997	Bamji et al.	
	15.	5,757,089		05-26-1998	Ishizuka	
	16.	5,784,289		07-28-1998	Wang	
	17.	5,798,936		08-25-1998	Cheng	
	18.	5,838,583		11-1998	Varadarajan et al.	
	19.	5,889,677		03-30-1999	Yasuda et al.	
	20.	5,980,093		11-09-1999	Jones et al.	

Examiner	· · · · · · · · · · · · · · · · · · ·	Date	
Signature	·	Considered	<u> </u>

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. *Applicant's unique citation designation number(optional) *See Kinds Codes of USPTO Patent Documents at www.uspto.com or MPEP 901.04. *Senter Office that issued the document, by the two-letter code (WIPO Standard ST.3). *For. Japanese patent documents, the indication of the year of the Emperor must precede the serial number of the patent document. *Aking of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. *Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box → +

Based on PTO/S6/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

	Substitute for form	1449A/P1	го	Application Number	10/079,270	
				Filing Date	2/20/02	
	RMATION D			First Named Inventor	Steven Toig	
SIAI	EMENIE	AFFL	ICANI	Group Art Unit	2825	
(us	se as many sheets	as neces	sary)	Examiner Name	Paul Dinh	
Sheet	2	of	7	Attorney Docket Number	SPLX.P0127	

			U.S.	PATENT DOCUMENTS
21.	6,070,108		05-30-2000	Andreev et al.
22.	6,128,767		10-03-200	Chapman
23.	6,209,123	B1	03-27-2001	Maziasz et al.
. 24.	6,253,363	B1	06-26-2001	Gasanov et al.
25.	6,295,634	B1	09-25-2001	Matsumoto
26.	6,324,674	B2	11-27-2001	Andreov et al.
27.	6,324,675	B1	11-27-2001	Dutta et al.
28.	6,327,693	B1	12-04-2001	Cheng et al.
29.	6,327,694	B1	12-04-2001	Kanazawa
30.	6,330,707		12-11-2001	Shinomiya et al.
31.	6,378,121	B1	04-23-2002	Hiraga
32.	6,407,434	B1	06-18-2002	Rostoker et al.
33.	6,412,102	B1	06-25-2002	Andreev et al.
34.	6,415,422	В1	07-02-2002	Mehrotra et al.
35.	6,442,743	B1	08-27-2002	Sarrafzadeh et al.
. 36.	6,448,591	B1	09-10-2002	Juengling
37.	6,473,891	B1	10-29-2002	Shively
38.	6,480,991	B1	11-12-2002	Cho et al.
39.	6,490,713	B2	12-03-2002	Matsumoto
40.	6,519,751	B2	02-11-2003	Sriram et al.
41.	6,543,043	B1	04-01-2003	Wang et al.
42.	6,546,540	В1	04-08-2003	Igarashi et al.
43.	6,557,145	B2	04-29-2003	Boyle et al.

Examiner		Date	!
Signature	<u></u>	Considered	

^{*} EXAMINER. Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * Applicant's unique citation designation number(optional). * See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. * Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). * For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. * Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. * Applicant is to place a check mark here if English language Translation is attached.

Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gattering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief information Officer, U.S. Palent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box →

Based on PTO/SB/08 a & b (05-03) Approved for use through 05/31/2003. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid QMB control number

	Substitute for for	m 1449A/PT	O	Application Number	10/079,270		
				Filing Date	2/20/02		
	RMATION			First Named Inventor	Steven Teig		
SIAI	EMENT B	T APPLI	CAIVI	Group Art Unit	2825		
(use as many sheets as necessary)				Examiner Name	Paul Dinh		
Sheet	3	of	7	Attorney Docket Number	SPLX.P0127		

U.S. PATENT DOCUMENTS										
44.	6,567,967	B2	05-20-2003	Greidinger et al.						

	_			F	OREIGN PATENT DOCUMEN	TS		
Examiner*	Cite No.1	Office		ment Kind Cod tif known	Name of Patentee or Applicant of Cited Document	Date of Publication MM-DD-YYYY	Pages, Cólumns, Lines, Where Relevant Fassages or Relevant Figures Appsai	T
	45.	JP	411296560	A	Matsumoto et al.	10-29-1999	with English translation of Abstract;	
	46.	JР	2000-82743	A	lgarashi et al.	03-21-2000	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	,
	47.	JP	H03-173471	A	Tawada et al.	07-26-1991	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	7
	48.	JP	H05-243379	A	Masako Kubota	09-21-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application	N
	49.	JP	H05-102305	A	Akihiro Sato	04-23-1993	with Japariese Patent Office's English translation of Abstract; and with English translation of the application.	V

Examiner	Date	
	Considered	
Signature		

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not leader to the form with part crymunication to applicant. Applicant's unique citation designation number(optional). ² See Kinds Codes of EXAMINEE. Initial inference considered, whether of not citation is in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number(optional). See Kinds Cedes of USPTO Patent Documents at www.paplo.gov or MPEP 901.04. Senter Office that issued the document, by the two-letter code (WIPO Standard ST.2). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Skind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language. Translation is attached.

Translation is attached.

This collection of information is required by 37CFR 1 97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box → +

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

	Substitute for for	n 14494/PT	0	Application Number	10/079,270
				Filing Date	2/20/02
INFO	RMATION	DISCLO	SURE	First Named Inventor	Steven Teig
STA	TEMENT B	Y APPLI	CANT	Group Art Unit	2825
(1	ise as many <mark>she</mark> e	els as necess	ary)	Examiner Name	Paul Dinh
Sheet	4	of	7	Attorney Docket Number	SPLX.P0127

 	-	,		FOREIGN PATENT DOCUMENTS		•	
50.	JP	H07-86407	A	Shinpei Miura	03-31-1995	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	,
51.	JP	H09-162279	A	Masaaki Yoshida	06-20-1997	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	

RECEIVED
CENTRAL FAX CENTER
DEC 1 0 2003
UNCHICIO

Examiner	Date	
	Considered	
Signature	 CONDIGORG	

Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, unduring gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

^{*}EXAMINER: Initial it reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number(optional). See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language.

Please type a plus sign (+) inside this box →

Based on PTC/SB/08 a & b (05-03) Approved for use through 05/31/2003. OMB 0551-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

	Substitute for for	m 1449A/PTC)	Application Number	10/079,270
			•	Filing Date	2/20/02
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				First Named Inventor	Steven Teig
				Group Art Unit	2825
(use as many sheets as necessary)			ary)	Examiner Name	Paul Dinh
Sheet	5	of	7	Attorney Docket Number	SPLX.P0127

		FOREIGN PATENT DOCUMENTS	
		NON PATENT LITERATURE DOCUMENTS	
Examiner*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	6
mileio	52.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.	_
	53.	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp. 956-931.	
	54.	Brambilla, A. et al., Statistical Method for the Analysis of Interconnects Delay in Submicrometer Layouts, IEEE, 8/2001, pp. 957-966.	
	55.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.	
	56.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35.	<u> </u>
	57.	Cheng, K. et al., Manhattan or Non Manhattan? A Study of Atternative VLSI Routing Architectures, pp 47-52, 2000.	
	58.	Cheng, K., Steiner Problem in Octilinear Routing Model, a Thesis Submitted for the Degree of Master of Science, National University Singapore, 1995, pp. 1-122.	
	59.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, iss. 3A, pp. 929-933.	
	60.	Cong. J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arborescence Problem with Applications to VLSI Physical Design, Cadence Design Systems and UCLA Computer Science Department, pp.88-95.	
	61.	Cong. J. et al., Performance-Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.	
	62.	Enbody, R. et al., Near-Optimal <i>n</i> -Layer Channel Routing, 23 rd Design Automation Conference, 1986, pp. 708-714.	
	63.	Fang, S. et al., Constrained Via Minimization with Practical Considerations for Multi-Layer VLSI/PCB Routing Problems, 28 th ACM/IEEE Design Automation Conference, 1991, pp. 60-65.	!
	64.	Hom, I. et al., Estimation of the Number of Routing Layers and Total Wirelength in a PCB Through Wiring Distribution Analysis, 1996, pp. 1-6.	

	·		
		Date	· · · · · · · · · · · · · · · · · · ·
Examiner			•
Signature		Considered	
Judilature			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not EXAMINER: Initial if reference considered, whether or not chatton is in comformance with whether out. Draw line through chatton is not in conformation and considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number(optional). See Kinds Codes of USPTO Patent Documents at www.tespib.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language Translation is attached.

Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete. USPTO to process an application and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on tire amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Palent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this bux → +

12/10/03 14:11

Based on PTC/SB/06 a & b (05-03)
Approved for use through 05/21/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OM8 control number

	Substitute for for	m 1449A/PT0)	Application Number	10/079,270
				Filing Date	2/20/02
	RMATION			First Named Inventor	Steven Teig
SIA	ГЕМЕНТ В	T APPLI	CANI	Group Art Unit	2825
(u	se as many shee	ets as necessa	ary)	Examiner Name	Paul Dinh
Sheet	6	of	7	Attorney Docket Number	SPLX.P0127

	FOREIGN PATENT DOCUMENTS
65.	Hong, X. et al., Performance-Driven Steiner Tree Algorithms for Global Routing, 30 th ACM/IEEE Design Automation Conference, 1993, pp. 177-181.
66.	Hu, J et al.: "A Timing-Constrained algorithm for Simultaneous Global Routing of Multiple Nets" IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA USA, 5-9 Nov. 2000. Pages 99-103.
67.	Kastner R et al.: "Predictable Routing" IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000. Pages 110-113
68.	Khoo, K. et al., An Efficient Multilayer MCM Router Based on Four-Via Routing, 30 th ACM/IEEE Design Automation Conference, 1993, pp. 590-595.
69.	Lillis, J. et al., Table-Lookup Methods for Improved Performance-Driven Routing, 1998, pp. 368-373.
70.	Lipski, W. et al., A Unified Approach to Layout Wirability, Mathimatical Systems Theory, 1987, pp. 189- 203.
71.	Lodi, E. et al., A Preliminary Study of a Diagonal Channel-Routing Model, Algorithmica, 1989, pp.585-597.
72.	Lodi, E. et al., Lecture Notes in Computer Science, A 4d Channel Router for a Two Layer Diagonal Model, pp. 464-476, July 1988.
73.	Naclerio, N. et al., Via Minimization for Gridless Layouts, 24 th ACM/IEEE Design Automation Conference, 1987, pp. 159-165.
74.	Nam, G. et al, Satisfiability-Based Layout Revisited: Detailed Routing of Complex FPGAs Via Search- Based Boolean SAT, 1999, pp. 167-175.
75.	Oh, J. et al., Constructing Lower and Upper Bounded Delay Routing Trees Using Linear Programming, 33rd Design Automation Conference, 1996.
76.	Partitioning Logic on to Graph Structure, IBM Technical Disclosure Bulletin, February 1990, vol. 32, iss. 9A, pp. 469-475.
77.	Phillips, N., Channel Routing by Constraint Logic, Department of Computer Science Southern Illinois University, ACM, 1992.

Examiner	Date	1
2	Considered	
Signature		<u></u>

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant. Applicant's unique citation designation number(optional). See Kinds Codes of USPTO Patent Documents at www.usptc.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (MIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language Translation is attached.

Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box →

Based on PTO/SB/08 a & b (05-03)
Approved for use Ihrough 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid CIMB control number

	Substitute for for	m 1449A/PTO	1	Application Number	10/079,270	
				Filing Date	2/20/02	•
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				First Named Inventor	Steven Teig	
				Group Art Unit	2825	
(use as many sheels as necessary)			ry)	Examiner Name	Paul Dinh	
Sheet	7	of	7	Attorney Docket Number	SPLX.P0127	

_		FOREIGN PATENT DOCUMENTS	
	78.	Takashima, Y. et al, Routability of FPGAs with Extremal Switch-Block Structures, IEICE Trans. Fundamentals, vol. E81-A, No. 5, May 1998, pp. 850-856.	
	79.	Thakur, S. et al., Algorithms for a Switch Module Routing Problem, 1994, pp. 265-270.	
	80.	Theune, D., et al., HERO: Hierarchical EMC-constrained routing, 11/1992, IEEE pp 468-472	
	81.	Tseng, H., Timing and Crosstalk Driven Area Routing, pp. 378-381.	
	82.	Wang, D., Novel Routing Schemes for IC Layout, Part I: Two-Layer Channel Routing, 28 th ACM/IEEE Automation Conference, 1991, pp. 49-53.	
	83.	Wang, M. et al., Modeling and Minimization of Routing Congestion, Jan. 2000, IEEE proceedings of ASP-DAC, Asia and South Pacific, pp. 185-190.	
	84.	Wood, G. et al., FPGA Routing and Routability Estimation Via Boolean Satisfiability, Department of Electrical and Computer Engineering Carnegie Mellon University, Pittsburgh, PA, pp. 119-125.	
	85.	Zhang, C.X. et al., Floorplan Design Using a Hierarchical Neutral Learning Algorithm, IEEE, 6/1991. pp. 2060-2063.	
	86.	Zhou, H. et al., An Optimal Algorithm for River Routing with Crosstalk Constraints, 1996.	<u> </u>
	87.	Zhou, H. et al., Global Routing with Crosstalk Constraints, Department of Computer Sciences, University of Texas, 1998, pp. 374-377.	<u> </u>
	88.	Zhou, H. et al., Optimal River Routing with Crosstalk Constraints, ACM Transactions on Design Automation of Electronic Systems, vol. 3, No. 3, July 1998, pp. 496-514.	

Examiner	Date	
	Considered	· i
Signature	Considered	

^{*}EXAMINER. Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation troot in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspic.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ² For Japanese patent documents, the indication of the year of the Emperor must precede the serial number of the patent document. ² Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language

Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

10/24/03

Based on PTO/SB/08 a 8 b (05-03) Approved for use through 05/31/2003. OMB 0651-0031 U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Please type a plus sign (+) inside this box (*) +

¥ 12/10/03 14:11

		- 444045	TO	Application Number	10/079,270
	Substitute for form			Filing Date	2/20/02
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				First Named Inventor	Steven Teig
				Group Art Unit	2825
. (1	ise as many sheel	s as nece	ssary)	Examiner Name	Paul Dinh
Sheet	1	of	4	Attorney Docket Number	SPLX.P0127

			RELATED U.	S. PATENT DOCUM	MENTS
Examiner Initials	Cite No. 1	U.S. Palent Document	Date of filing MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Related Application Data
	1.	2002/0133798	12-06-2000	Steven Teig et al.	Present application is a CIP of 2002/0133798
	2.	2002/0100007	12-06-2000	Steven Teig et al.	Present application is a CIP of 2002/0100007
- -	3.	2002/0073390 S/N 09/737,210	12-13-2000	Steven Teig et al.	Continuation of parent 2002/0133798
 ¦	4.	Preliminary Amendment S/N 09/737,210	12-13-2000	Steven Teig et al.	This Preliminary Amendment Is submitted as the publication 2002/0073390 does not accurately reflect the claims of S/N 09/737,210.
	5.	S/N 09/737,220	12-13-2000	Steven Teig et al.	Continuation of parent 2002/0133798
	6.	S/N 09/737,245	12-13-2000	Steven Teig et al.	Continuation of parent 2002/0133798
	7.	S/N 09/739,460	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	8.	2002/0124231 S/N 09/739.580	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	9.	Preliminary Amendment S/N 09/739,580	12-15-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0124231 does not accurately reflect the claims of S/N 09/739,580.
	10.	S/N 09/739,589	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	11.	S/N 09/742,171	12-19-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	12.	2003/0121015 S/N 09/745,067	12-19-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
	13.	Preliminary Amendment S/N 09/745,067	12-19-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0121015 does not accurately reflect the claims of S/N 09/745,067.
	14.	2002/0069397	01-13-2002	Steven Telg et al.	CIP of 2002/0100007 & 2002/0133798.
	15.		02-20-2002	Steven Teig et al.	CIP of 2002/0100007 & 2002/0133798.

		Date	
- 1	Examiner	Considered	1
-1	Signature	Gerisidered	

Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or rotain a benefit by the public which is to file (and by the This collection of information is required by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, USPTO time will vary depending upon the individual case. Any comments including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments including gathering, preparing, and submitting the complete deprivation to complete the complete deprivation of the complete deprivat including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burdon, should be sent to the Chief Information Officer, U.S. Patent and Tracemark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box 19

Based on PTO/S8/08 a & b (95-03)
Approved for use through 05/31/2003 OMS 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO			Application Number	10/079,270	
			Filing Date	2/20/02	
RMATION	DISCLOS	SURE	First Named Inventor	Steven Teig	
STATEMENT BY APPLICANT			Group Art Unit	2825	
(use as many sheets as necessary)			Examiner Name	Paul Dinh	
Sheet 2 of 4			Attorney Docket Number	SPLX P0127	
	RMATION TEMENT B	PRMATION DISCLOSTEMENT BY APPLICATION OF THE PROPERTY OF T	DRMATION DISCLOSURE TEMENT BY APPLICANT use as many sheets as necessary)	PRMATION DISCLOSURE TEMENT BY APPLICANT Isse as many sheets as necessary) Filing Date First Named Inventor Group Art Unit Examiner Name	

	 -	RELATED U.	S. PATENT DOCU	MENTS
16	3. S/N 10/329,241	12-23-2002	Steven Teig et al.	CIP of 2002/0133798
1	Preliminary	12-23-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088841 does not accurately reflect the claims of S/N 10/329,241.
· 1	3. 2003/0018947	12-07-2001	Steven Teig et al.	Application regarding related routing technology
	9. 2002/0147958	10-19-2001	Steven Teig et al.	Application regarding related routing technology
21	0. 2003/0079193	12-07-2001	Steven Teig et al.	Application regarding related routing technology
2	1. 2003/0063614	01-04-2002	Steven Teig et al.	Application regarding related routing technology
2:	2. 2003/0064559	01-04-2002	Steven Teig et al.	Application regarding related routing technology
2:	3. 2003/0063568	01-04-2002	Steven Toig et al.	Application regarding related routing technology
24	2003/0101428 S/N 10/040,915	01-05-2002	Steven Teig et al.	Application regarding related routing technology
2:	Preliminary	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0101428 does not accurately reflect the claims of S/N 10/040,915.
21	2002/0166105 S/N 10/040,948	01-05-2002	Steven Teig et al.	Application regarding related routing technology
2	Preliminary	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0166105 does not accurately reflect the claims of S/N 10/040,948.
	3. 2003/0043827 S/N 10/040,953	01-05-2002	Steven Teig et al.	Application regarding related routing technology
29	Preliminary	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0043827 does not

Evaminu		Date	
Examiner		Considered	Į.
Signature	·	Considered	
Signature			

^{*}EXAMINER: Initial it reference considered, whether or not citation is in conformance with MPEP 609. Draw line: through citation if not in conformance and not considered include copy of this form with next communication to applicant. ¹ Applicant is unique citation designation number(optionai). ² See Kinds Codes of USPTO Patent Documents at www.usa.org/wind-en/ enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). "For Japanose patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ² Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ² Applicant is to place a check mark here if English language Translation is attached.

The reference of information is required by 2005P 107 and 1.99. The information is attached.

Translation is attached. The solicition is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a bonefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete. Instituting the properties of the complete application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer. U.S. Patent and Trudemark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box 1911

Based on PTC/SB/08 a & 5 (05-03)
Approved for use through C5/31/2003. OMB 6551-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO			Application Number	10/079,270
			Filing Date	2/20/02
	RMATION DISC		First Named Inventor	Sleven Teig
STATEMENT BY APPLICANT			Group Art Unit	2825
(u.	se as many sheets as no	ecessary)	Examiner Name	Paul Dinh
Sneet	Sneet 3 of 4		Attorney Docket Number	SPLX.P0127

			RELATED U	S. PATENT DOCU	MENTS
		S/N 10/040,953			accurately reflect the claims of S/N 10/040,953.
	30.	2003/0023943 S/N 10/040,954	01-05-2002	Steven Teig et al.	Application regarding related routing technology
	31.	Preliminary Amendment S/N 10/040,954	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0023943 does not accurately reflect the claims of S/N 10/040,954.
	32.	2003/0066042 S/N 10/040,963	01-05-2002	Steven Teig et al.	Application regarding related routing technology
	33.	Preliminary Amendment S/N 10/040,963	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0066042 does not accurately reflect the claims of S/N 10/040,963.
	34.	2002/0174412 S/N 10/041,942	01-07-2002	Steven Teig et al.	Application regarding related routing technology
	35.	Preliminary Amendment S/N 10/041,942	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0174412 does not accurately reflect the claims of S/N 10/041,942.
	36.	2003/0088844 S/N 10/041,957	01-07-2002	Steven Teig et al.	Application regarding related routing technology
	37.	Preliminary Amendment S/N 10/041,957	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088844 does not accurately reflect the claims of S/N 10/041,957.
	38.	2002/0199165 S/N 10/046,864	01-13-2002	Steven Teig et al.	Application regarding related routing technology
	39.	Preliminary Amendment S/N 10/046,864	01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0199165 does not accurately reflect the claims of S/N 10/046,864.
	40.	2003/0066043	01-13-2002	Steven Teig et al.	Application regarding related routing technology

Examiner	Date	
Signature	Considered	

^{*}EXAMINER* Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered include copy of this form with next communication to applicant. Applicant's unique citation designation number(optional). *See Kinds Codes of USPTO Patent Documents at <a href="https://www.isptec.jac.or/MPEP-9th-04-2-applicant-stream-number-of-patent-occurr

This collection of information is required by 37CFR 1 97 and 1 98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief information Officer. U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box 199

Based on PTO/SB/08 a % 5 (05 03) Approved for use through 05/31/2003 OMH 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				Application Number	10/079,270
				Filing Date	2/20/02
	RMATION I			First Named Inventor	Steven Teig
STATEMENT BY APPLICANT			CAN	Group Art Unit	2825
(ii	(use as many sheets as necessary)			Examiner Name	Paul Dinh
Sheet	Sheet 4 of 4		Attorney Docket Number	SPLX.P0127	

			RELATED U.	S. PATENT DOCU	MENTS
	41.	2003/0115566	01-13-2002	Steven Teig	Application regarding related routing technology
	42.	2003/0056187 S/N 10/047,982	01-14-2002	Steven Teig et al.	Application regarding related routing technology
	43.	Preliminary Amendment S/N 10/047,982	01-14-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0056187 does not accurately reflect the claims of S/N 10/047,982.
	44.	2003/0066044	01-13-2002	Steven Teig et al.	Application regarding related routing technology
	45.	2003/0066045	01-13-2002	Steven Teig et al.	Application regarding related routing technology
	46.	2003/0088845 S/N 10/047,978	01-13-2002	Steven Teig et al.	Application regarding related routing technology
	47.	Preliminary Amendment S/N 10/047,978	01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088845 does not accurately reflect the claims of S/N 10/047,978.

Examiner		Date	}
Signature :	,	Considered	1

^{*}EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant. *Applicant's unique citation designation number(optional). *See Kinds Codes of USPTO Patent Documents at www.nsglo.gov.or.mPEP-901.04. *Enter Office that issued the document, by the wo-letter code (WIPO Standard ST.3). *For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. *Applicant is to place a check mark here if English language.

Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to comprete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Office, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. 80x 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ACDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.